

CLAIMS

1. Device for conveying powders through pipelines comprising at least one pumping device (10) comprising in
5 turn a suction inlet (12) and a delivery outlet (13), a tubular chamber (11) with opposite ends connected respectively to said inlet (12) through an input valve (14) and to said outlet (13) through an output valve (15), a vacuum source and a pressure source connected upon command
10 to the chamber (11) in axially distanced positions to create a vacuum respectively and alternatively in the chamber in relation to the environment upstream from the device and a pressure in relation to the environment downstream from the device.
- 15 2. Device according to claim 1, characterized in that the pumping devices (10) are two connected in parallel and operating in opposition to achieve a substantially constant flow of powder in output.
3. Device according to claim 1, characterized in that the
20 inlet valves (14) and the outlet valves (15) are sleeve valves with soft tube (30) passing through a drive chamber (34) that can be connected upon command to a pressure source to cause the throttling of the soft tube (30).
4. Device according to claim 3, characterized in that said
25 drive chamber (34) can be connected upon command to a suction source to force the opening of the valve itself (14, 15).
5. Device according to claim 1, characterized in that said vacuum source and said pressure source communicate with

said chamber (11) respectively by means of a first (19) and a second (18) porous sect that allow the passage of the air and are impermeable to the powders conveyed.

6. Device according to claim 5, characterized in that the
5 first porous sect (19) is situated in proximity of the outlet valve (15) of the chamber (11) and the second porous sect (18) is situated in proximity of the inlet valve (14) of the chamber.

7. Device according to claim 5, characterized in that said
10 first (19) and said second (18) porous sect are a tubular segment of the wall of the tubular chamber (11).

8. Device according to claim 3, characterized in that said vacuum source and said pressure source communicate with said chamber (11) respectively by means of a first (19) and
15 a second (18) porous sect that allow the passage of the air and are impermeable to the powders conveyed and in that in each pumping device (10) the two soft tube sleeves (30) of the inlet and outlet valves (14, 15), the tubular chamber (11) and the two porous sects (19, 18) are segments of a
20 conduit that extends between the suction inlet (12) and the delivery outlet (13).

9. Device according to claim 8, characterized in that the said conduit extends through a containing body that forms the drive chambers (34) in correspondence with the segments
25 of soft tube (30) and chambers linking to the pressure and vacuum sources in correspondence with the porous sect (18, 19) segments.

10. Device according to claim 9, characterized in that the conduit is rectilinear.

11. Device according to claim 1, characterized in that many pumping devices (10) are connected in parallel and operating with different phase to each other.

12. Device according to claim 11 characterized in that the
5 pumping devices (10) are three.